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ABSTRACT

The Higher Horizons 100 program provided academic, cultural, and counseling services to underachieving secondary school students in grades seven through ten. The program goals for 1979-1980 included gains in students' reading and mathematics scores on standardized tests, an increased percentage of attendance, and the development of students' positive and realistic attitudes toward themselves and school. Test scores from the Metropolitan Achievement Tests and the Comprehensive Test of Basic Skills indicated that students made significant gains in reading and mathematics exceeding those expected for the year. The goal of a standard attendance rate of 90 percent was surpassed by all participating schools. The results of a pupil rating form which measured self-esteem, perceptions of personal and scholastic growth, and attitudes toward school indicated that students were supportive of Higher Horizons and were positive in their perceptions of themselves, school, and the academic future. Recommendations for future program implementation are included. Evaluation data are included in tables and an appendix. (MK)

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# HIGHER HORIZONS 100

## REPORT 80-7

Evaluation Office
Hartford Public Schools
249 High Street
Hartford, Connecticut 06103

July 1980



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U S DEPARTMENT OF HEALTH, EDUCATION & WELFARE
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- ABSTRACT -

During its fifteenth year of operation, each of the eight Higher Horizons 100 teams produced an impressive array of accomplishments. All program objectives were attained with standards substantially bettered. Fall to Spring MAT and CTBS scores produced statistically significant mean gains which generally exceeded set standards and on all subtests. Only two teams failed to reach the stated gain level, and these on only one out of four subtest areas.

When spring to spring city-wide test scores were analyzed, gain patterns were generally comparable to the fall to spring testing.

Relative percentile placement change gains reached the 3 point gain level in 36 out of 40 subtest cases, while at least three Normal Curve Equivalent gains were produced on 34 out of 40 subtests. In common with previous year ratings, pupil reactions to HH100 seemed positive, realistic, and generally attuned to the academic import of the program.

Despite the use of a more rigorous attendance standard, all team averages exceeded 90% for a program average of 93.9. Team gains above the various school standards ranged from 1.8 to 5.1 percentage points.

The evaluation notes that numbers and percentages of youngsters remaining in HH100 for more than one year and overall enrollment figures were comparable to those reported in 1978-79.

In addition to the reporting of project successes, the evaluation updates the recommendations which were made last year. Recommendations include the need to gather longitudinal HH100 data, suggestions for reducing test redundancy, the resolution of two existent staff problems, suggested changes in the evaluation process, and the need to continually monitor the program so as to insure full use of all enrollment spaces.

HIGHER HORIZONS 100

1979 - 1980 Compensatory Program Evaluation

Services Provided

The Higher Horizons 100 program (HH100) continued to provide groups of underachieving secondary school students with an articulated program of academic, cultural, and counseling services. Throughout its 15 years of operation, HH100 has continued to stress the same basic objectives as it assisted these same students to improve their basic academic skills in language and in mathematics, their self-concept, and the capability to better adjust to the school.

Small classes, intensive counseling, individualized instruction, civic trips, guest speakers, and other student-based activities are provided in a school within the school atmosphere to support the basic philosophy which permeates the HH100 clusters. Of these clusters, three operate at the ninth grade level in each of the city's three high schools, one is a tenth grade cluster, and there are two clusters serving each seventh and eighth grade middle school. Clusters are staffed by a team of five or six teachers, a counselor, and project aide. Compensatory funding is also provided for limited supplies and cultural activities. In addition, one team leader received a differential for providing inter-team liaison services.

Program Accomplishments

A number of salutary program strengths were reported. Three clusters reported having student-parent banquets at the end of the school year using monies which came both from fund raising and from business contributions. The Aetna, Travelers, and Connecticut General insurance companies and the Hartford National

Bank and Connecticut Bank & Trust not only contributed money but sent company representatives to HH100 clusters so as to provide firsthand instruction in the business world. In addition, HH100 was recognized at the new Department of Education's Region I inauguration as one of four outstanding compensatory programs in Connecticut. As further evidence of success, Charlottesville, Virginia has adopted the HH100 concept while over forty requests for information were received by the program during the year. HH100 was again included in a current USOE listing of nationally-validated programs, Educational Programs That Work, and was encouraged to submit an application to the Connecticut State Department of Education for State validation. An HH100 workshop and awareness session was also conducted in Gainesville, Georgia, by the program evaluator.

Problem Areas

It was reported that several middle school problems continued to be unresolved. At Quirk, a creative writing teacher was assigned on a half-time basis to share her services between the two teams thus increasing the number of supplementary staff which was funded. While this still represents a .5 position shortage, it is anticipated that this situation will be corrected during the coming year.

The Quirk counselor serving the HH100 program continues to be identified as a general budget position, while the head counselor is funded under Title I. Funding should be changed in this area.

Evaluation

The HH100 evaluation examined two specific questions:

1. To what extent were project objectives met?

2. Were services provided in accord with the funding proposal?

Objective 1: Students will on the average make educationally significant gains of at least three percentile points in reading and in mathematics.

Objective 2: Students will on the average make a better percentage of attendance for the academic year than that of the hosting school grade level.

Objective 3: Students will acquire a realistic and positive attitude toward themselves and school.

Objective 1: Students will on the average make educationally significant gains of at least three percentile points in reading and in mathematics.

In order to assess the educational objective, several strategies were contemplated. For the seven HH100 teams which covered grades seven through nine, reading and mathematics skill gains were measured by fall to spring testing using the Metropolitan Achievement Tests (MAT), 1970 edition. The same skill areas were measured for the tenth grade team using the Comprehensive Test of Basic Skills (CTBS), 1973 edition given over the same time frame. Test scores were analyzed using a t-test of related measures at the .05 level of confidence.

In the addition of the program-specific tests whereby all students received either the MAT or CTBS in the fall upon admission to the program, and then again in the spring at the time of city-wide testing, the previous spring MAT data were also collected where available. These data were also analyzed using the same t-test of related measures at the .05 level of confidence. While no analysis of variance (ANOVA) was used to adjust spring to fall pre-test data, the separate analysis was used as an indicator which might help to determine whether there were important differences between spring to spring and fall to spring testing, and whether both sets of data were relatively complete. Since HH100 teams have

continually reported that spring test data were often not available thus mandating fall pretesting, it was felt that this analysis might shed some light on this particular need.

While the various test data are reported in the tables which follow, an explanation of the table headings may be in order.

- Teams and grade levels. MAT scores are reported by teams and subtest; i.e., Word Knowledge (WK), Reading (RD), etc., with the HPHS 10th grade team Comprehensive Test of Basic Skills (CTBS) subtest scores reported in similar fashion. Since there are no tenth grade MAT norms, and since the MAT and CTBS scores are not compatible, CTBS data are shown in a separate table.

- N refers to the number of students who had both pre and post test scores on a particular subtest. While each team provided make-up testing, it is not unusual for an N to be lower than the actual team enrollment nor is it unusual for the N to differ from subtest to subtest since reading and math tests are usually given on separate days.

- Pre and post test scores are reported in standard score (SS) increments. Standard scores represent a lineal score distribution scale which enables one to equate gains at any point on the scale. Unlike grade equivalent (GE) increments, standard score gains of, for example, from 10 to 20 can be equated with gains from 90 to 100 since both represent the same relative amount of change. With the old GE system, a youngster who tested near the top of a reading test might go "up" 4 or 5 months by correctly completing only 1 or 2 questions, while another youngster who tested at the middle of the same test could complete the same additional 1 or 2 questions with possibly no apparent change in score.

- The standard deviation (SD) is a measure of score distribution or variability. The higher the SD, the more the scores are spread out. Standard deviations are used to look at the scores pre and post so as to help determine if the group scores spread out, tightened up, or remained about the same.

- The difference (Dif) between pre and post test scores is determined by subtesting the average, or mean, pretest score from the average post test score.

- To determine whether the difference between pre and post test scores has any educational meaning, a statistical technique called the t-test is used. A high t indicates that the change was a real one and not just a fluke of fate, while a low t indicates that any difference should probably be taken with a grain of salt.

- A reported significance (Sig) level is really an estimate of probability. A reported significance level of .01 means that the difference is probably real in 99 out of 100 cases, while a reported .05 level represents a probability of 95 out of 100. Either level of significance is statistical evidence that the reported change is probably real. If the change is non-significant (NS) the apparent change should be taken cautiously.

Tables 1 - 4 show comparative fall to spring Word Knowledge (WK), Reading (RD), Arithmetic Comprehension (AC), and Problem Solving (PS) MAT subtest scores for each of the seven grade 7-9 teams and for the HH100 program as a whole. Note here that with minor exceptions, mean differences were significant at the .01 level, thus reaching and exceeding the stated level of confidence. For the WHS and Fox 7/8P teams, small but non-significant reading gains were reported.

Table 1

Comparison of Mean Metropolitan Word Knowledge Standard Score Changes by Team, Fall 1979 - Spring 1980

| Team | N | Pre WK | SD | Post WK | SD | Dif | t | Sig |
|---|---|---|---|---|---|---|---|---|
| HPHS-9 | 65 | 83.9 | 10.2 | 89.5 | 9.8 | 5.6 | 9.0 | .01 |
| WHS-9 | 76 | 85.0 | 7.9 | 88.8 | 7.2 | 3.8 | 5.4 | .01 |
| BHS-9 | 82 | 80.7 | 9.6 | 105.9 | 14.0 | 25.2 | 20.0 | .01 |
| Fox 7/8D | 86 | 73.1 | 12.5 | 81.4 | 9.3 | 8.3 | 7.3 | .01 |
| Fox 7/8P | 82 | 75.2 | 10.8 | 82.6 | 15.5 | 7.4 | 4.6 | .01 |
| Quirk-7 | 81 | 70.9 | 8.4 | 77.1 | 8.6 | 6.2 | 6.8 | .01 |
| Quirk-8 | 81 | 79.0 | 7.6 | 84.9 | 7.2 | 5.9 | 8.9 | .01 |
| Total | 554 | 78.0 | 10.9 | 87.9 | 24.2 | 9.9 | 10.3 | .01 |

Table 2

Comparison of Mean Metropolitan Reading Standard Scores by Team, Fall 1979 - Spring 1980

| Team | N | Pre RD | SD | Post RD | SD | Dif | t | Sig |
|---|---|---|---|---|---|---|---|---|
| HPHS-9 | 71 | 80.6 | 10.6 | 87.2 | 10.5 | 6.6 | 5.6 | .01 |
| WHS-9 | 76 | 82.2 | 7.7 | 82.8 | 20.2 | .6 | .3 | NS |
| BHS-9 | 82 | 77.7 | 11.4 | 96.2 | 10.6 | 18.5 | 19.1 | .01 |
| Fox 7/8D | 86 | 70.9 | 12.3 | 79.0 | 10.5 | 8.1 | 7.2 | .01 |
| Fox 7/8P | 82 | 72.1 | 11.4 | 88.8 | 80.3 | 16.7 | 1.8 | NS |
| Quirk-7 | 81 | 70.4 | 8.6 | 78.0 | 9.3 | 7.6 | 7.1 | .01 |
| Quirk-8 | 81 | 74.8 | 9.6 | 82.9 | 9.1 | 8.1 | 9.0 | .01 |
| Total | 559 | 75.3 | 11.2 | 84.9 | 33.1 | 9.6 | 6.9 | .01 |

Table 3

Comparison of Mean Metropolitan Arithmetic Computation Standard Scores
by Team, Fall 1979 - Spring 1980

| Tea. | N | Pre AC | SD | Post AC | SD | Dif | t | Sig |
|---|---|---|---|---|---|---|---|---|
| HPHS-9 | 67 | 95.5 | 9.5 | 100.7 | 8.1 | 5.2 | 7.0 | .01 |
| WHS-9 | 76 | 95.4 | 9.6 | 101.3 | 7.5 | 5.9 | 5.7 | .01 |
| BHS-9 | 82 | 92.4 | 9.9 | 99.0 | 8.3 | 6.6 | 8.9 | .01 |
| Fox 7/8D | 86 | 84.4 | 10.6 | 91.1 | 8.3 | 6.7 | 9.3 | .01 |
| Fox 7/8P | 76 | 86.0 | 9.8 | 96.5 | 12.6 | 10.5 | 5.9 | .01 |
| Quirk-7 | 81 | 85.1 | 8.8 | 94.4 | 8.4 | 9.3 | 9.7 | .01 |
| Quirk-8 | 82 | 89.4 | 8.6 | 100.1 | 6.3 | 10.7 | 14.0 | .01 |
| Total | 550 | 89.5 | 10.5 | 97.4 | 9.3 | 7.9 | 20.2 | .01 |

Table 4

Comparison of Mean Metropolitan Problem Solving Standard Scores
by Team, Fall 1979 - Spring 1980

| Team | N | Pre PS | SD | Post PS | SD | Dif | t | Sig |
|---|---|---|---|---|---|---|---|---|
| HPHS-9 | 69 | 92.5 | 8.6 | 96.3 | 8.5 | 3.8 | 5.0 | .01 |
| WHS-9 | 75 | 91.9 | 10.2 | 96.6 | 9.8 | 4.7 | 4.9 | .01 |
| BHS-9 | 82 | 88.5 | 9.5 | 93.2 | 9.2 | 4.7 | 6.1 | .01 |
| Fox 7/8D | 85 | 78.4 | 10.9 | 86.0 | 8.8 | 7.6 | 7.4 | .01 |
| Fox 7/8P | 76 | 80.7 | 9.0 | 89.3 | 8.0 | 17.6 | 10.1 | .01 |
| Quirk-7 | 81 | 79.7 | 8.4 | 89.0 | 9.3 | 9.3 | 8.2 | .01 |
| Quirk-8 | 81 | 82.9 | 9.8 | 92.6 | 8.0 | 9.7 | 9.2 | .01 |
| Total | 549 | 84.7 | 10.9 | 91.7 | 9.5 | 7.0 | 18.8 | .01 |

Table 5 provides similar data on the fall to spring CTBS testing for the HPHS grade 10 team. Again, all subtest gains were statistically significant at either the .01 or .05 level.

Table 5

Comparison of Mean HPHS-10 CTBS Standard Score Changes by Subtest, Fall 1979 - Spring 1980

| Subtest | N | Pre Test | SD | Post Test | SD | Dif | t | Sig. |
|---|---|---|---|---|---|---|---|---|
| Vocabulary | 75 | 511.6 | 79.8 | 549.2 | 89.9 | 37.6 | 5.30 | .01 |
| Comprehension | 75 | 515.6 | 92.6 | 549.5 | 94.4 | 33.9 | 4 10 | .01 |
| Computation | 76 | 495.9 | 63.3 | 524.3 | 58.2 | 28.4 | 6.0 | .01 |
| Concepts | 76 | 497.6 | 78.4 | 519.4 | 92.7 | 21.8 | 2.56 | .05 |

Over the years, HH100 has steadfastly maintained that fall to spring rather than spring-to-spring testing is needed by the program. Teams have reported that the more timely fall data are needed for placement purposes since spring information is relatively obsolete or may not even be available. To determine whether these objections were valid ones, an analyses of spring to spring as well as fall to spring MAT test scores was conducted. These data are reported for the 7 grade 7 to 9 teams in tables 6 - 9 which follow. Note that figures include the 508 youngsters having one or more matched subtest scores, about 91% of those tested, and about 73% of the projected HH100 enrollment. Since tenth graders are not routinely tested, spring to spring CTBS data are not available. While several differences could be reported comparable team, subtest, and program gain patterns were similar to those reported for the fall to spring testing period.

Table 6

Comparison of Mean Metropolitan Word Knowledge Standard Score Changes by Team, Spring 1979 - Spring 1980

| Team | N | Pre WK | SD | Post WK | SD | Dif | t | Sig. |
|---|---|---|---|---|---|---|---|---|
| HPHS-9 | 57 | 81.7 | 8.9 | 90.1 | 9.7 | 8.4 | 10.1 | .01 |
| WHS-9 | 79 | 80.6 | 6.6 | 88.9 | 7.6 | 8.3 | 9.3 | .01 |
| BHS-9 | 66 | 83.5 | 48.5 | 105.7 | 14.0 | 22.2 | 3.6 | .01 |
| Fox 7/8D | 86 | 76.4 | 7.4 | 81.7 | 9.2 | 5.3 | 7.1 | .01 |
| Fox 7/8P | 83 | 75.8 | 7.4 | 83.3 | 15.9 | 7.5 | 4.8 | .01 |
| Quirk-7 | 80 | 69.2 | 7.9 | 77.4 | 8.4 | 8.2 | 7.2 | .01 |
| Quirk-8 | 56 | 79.2 | 6.2 | 84.7 | 7.3 | 5.5 | 8.1 | .01 |
| Total | 507 | 77.7 | 19.2 | 86.8 | 13.6 | 9.1 | 10.0 | .01 |

Table 7

Comparison of Mean Metropolitan Reading Scores by Team, Spring 1979 - Spring 1980

| Team | N | Pre RD | SD | Post RD | SD | Dif. | t | Sig. |
|---|---|---|---|---|---|---|---|---|
| HPHS-9 | 57 | 86.3 | 8.4 | 87.8 | 10.1 | 1.5 | 1.4 | NS |
| WHS-9 | 79 | 83.7 | 6.1 | 82.8 | 19.9 | -.9 | -.4 | NS |
| BHS-9 | 66 | 91.5 | 12.5 | 96.3 | 10.7 | 14.8 | 11.4 | .01 |
| Fox 7/8D | 86 | 77.5 | 8.6 | 79.1 | 10.5 | 1.6 | 1.5 | NS |
| Fox 7/8P | 82 | 77.5 | 7.7 | 89.2 | 80.3 | 11.7 | 1.3 | NS |
| Quirk-7 | 80 | 74.0 | 8.0 | 77.8 | 9.4 | 3.8 | 3.5 | .01 |
| Quirk-8 | 58 | 78.5 | 15.3 | 83.0 | 9.6 | 4.5 | 7.6 | .01 |
| Total | 508 | 79.5 | 10.3 | 84.8 | 34.6 | 5.3 | 3.4 | .01 |

Table 8

Comparison of Mean Metropolitan Arithmetic Computation Scores by Team, Spring 1979 - Spring 1980

| Team | N | Pre AC | SD | Post AC | SD | Dif. | t | Sig. |
|---|---|---|---|---|---|---|---|---|
| HPHS-9 | 56 | 99.8 | 9.1 | 102.2 | 7.9 | 2.44 | 2.8 | .05 |
| WHS-9 | 79 | 95.9 | 9.3 | 101.0 | 7.9 | 5.1 | 6.7 | .01 |
| BHS-9 | 65 | 94.6 | 8.1 | 98.7 | 9.1 | 4.1 | 5.2 | .05 |
| Fox 7/8D | 86 | 89.8 | 8.8 | 91.4 | 8.5 | 1.6 | 2.1 | .01 |
| Fox 7/8P | 82 | 87.8 | 7.3 | 96.5 | 12.3 | 8.7 | 5.6 | .01 |
| Quirk-7 | 81 | 82.6 | 10.1 | 94.1 | 8.3 | 11.5 | 9.9 | .01 |
| Quirk-8 | 56 | 93.4 | 8.5 | 100.2 | 6.6 | 6.8 | 8.6 | .01 |
| Total | 505 | 91.4 | 10.2 | 97.3 | 9.6 | 5.9 | 14.0 | .01 |

Table 9

Comparison of Mean Metropolitan Problem Solving Scores by Team, Spring 1979 - Spring 1980

| Team | N | Pre PS | SD | Post PS | SD | Dif | t | Sig. |
|---|---|---|---|---|---|---|---|---|
| HPHS-9 | 54 | 93.5 | 10.0 | 96.8 | 7.9 | 3.3 | 3.9 | .01 |
| WHS-9 | 78 | 88.7 | 9.2 | 96.3 | 9.9 | 7.6 | 8.4 | .01 |
| BHS-9 | 65 | 88.1 | 10.8 | 93.8 | 9.5 | 5.7 | 5.6 | .01 |
| Fox 7/8D | 86 | 79.8 | 10.7 | 86.5 | 8.6 | 6.7 | 5.8 | .01 |
| Fox 7/8P | 82 | 80.8 | 8.8 | 89.4 | 7.8 | 8.6 | 9.9 | .01 |
| Quirk-7 | 80 | 76.6 | 10.4 | 88.5 | 9.1 | 11.9 | 8.9 | .01 |
| Quirk-8 | 56 | 85.0 | 7.7 | 92.1 | 7.7 | 7.1 | 7.6 | .01 |
| Total | 501 | 84.0 | 11.1 | 91.5 | 9.5 | 6.0 | 18.3 | .01 |

Given the foregoing similarities, one can logically ask whether complete fall to spring MAT testing is warranted. Happily, the question can avoid resolution since city-wide high school testing will be scheduled for the fall of the year. While State proficiency tests will be administered to all ninth graders, should this particular test be discontinued or should compatible city-wide test data be desired, fall testing will be implemented. The issue of redundancy in testing will be addressed in the recommendations section which follows.

As written, the academic objective noted that HH100 students would on the average make at least 6%ile point gains in reading and in mathematics. The use of percentile points as a standard assumes that any group of youngsters will fall at a particular point on a test scale in relation to their norm group peers at the beginning of the year. Given no special or added services, the youngsters will remain at the same relative position when tested at the end of the year. If additional services are provided and if these services increase learning, a gain in the placement position should result. When this relative placement change is converted to a linear scale using Normal Curve Equivalent (NCEs) units, any gains can be assumed to be salutary ones, while changes in a relative percentile placement or 3 or more points is in all probability an educationally significant one. Table 10 contains a comparison of pre to post relative percentile placements, and NCE changes for each of the 8 HH100 teams. Note that the ninth grade data are based on fall MAT norms only and that the Fox team data have been reported by grade level so that the appropriate fall to spring test norms could be used.

Table 10

Comparison of Mean Percentile Placement and NCE Changes,
Fall 1979 - Spring 1980

| Team & Grade | N | Subtest | Pre Test %ile | Pre Test NCE | Post Test %ile | Post Test NCE | Dif %ile | Dif NCE |
|---|---|---|---|---|---|---|---|---|
| HPHS-10 | 75 | Vocab | 22 | 33.7 | 25 | 35.8 | 3 | 2.1 |
| | 75 | Comp | 25 | 35.8 | 29 | 38.3 | 4 | 2.5 |
| | 76 | Compu | 27 | 37.1 | 31 | 39.6 | 4 | 2.5 |
| | 76 | Concepts | 20 | 32.3 | 21 | 33.0 | 1 | .7 |
| HPHS-9 | 63 | WK | 20 | 32.3 | 36 | 42.5 | 16 | 10.2 |
| | 71 | RD | 18 | 30.7 | 28 | 37.7 | 10 | 7.0 |
| | 67 | AC | 20 | 32.3 | 34 | 41.3 | 14 | 9.0 |
| | 69 | PS | 20 | 32.3 | 28 | 37.7 | 8 | 5.4 |
| WHS-9 | 76 | WK | 26 | 36.5 | 32 | 40.1 | 6 | 3.6 |
| | 76 | RD | 20 | 32.3 | 20 | 32.3 | -- | --- |
| | 76 | AC | 20 | 32.3 | 36 | 42.5 | 16 | 10.2 |
| | 75 | PS | 30 | 39.0 | 46 | 47.9 | 16 | 8.9 |
| BHS-9 | 82 | WK | 16 | 29.1 | 76 | 64.9 | 60 | 35.8 |
| | 82 | RD | 14 | 27.2 | 50 | 50.0 | 36 | 22.8 |
| | 82 | AC | 16 | 29.1 | 30 | 39.0 | 14 | 9.9 |
| | 82 | PS | 14 | 27.2 | 22 | 33.7 | 8 | 6.5 |
| Fox 7/8D-7 | 50 | WK | 14 | 27.2 | 28 | 37.7 | 14 | 10.5 |
| | 50 | RD | 11 | 24.2 | 22 | 33.7 | 11 | 9.5 |
| | 50 | AC | 14 | 27.2 | 26 | 36.5 | 12 | 9.3 |
| | 50 | PS | 14 | 27.2 | 28 | 37.7 | 14 | 10.5 |
| Fox 7/8D-8 | 36 | WK | 14 | 27.2 | 22 | 33.7 | 10 | 6.5 |
| | 36 | RD | 16 | 29.1 | 24 | 35.1 | 8 | 6.0 |
| | 36 | AC | 36 | 42.5 | 38 | 43.6 | 2 | 1.1 |
| | 35 | PS | 10 | 23.0 | 22 | 33.7 | 12 | 10.7 |
| Fox 7/8P-7 | 42 | WK | 12 | 25.3 | 32 | 40.1 | 20 | 14.8 |
| | 42 | RD | 10 | 23.0 | 23 | 34.4 | 13 | 11.4 |
| | 41 | AC | 18 | 30.7 | 42 | 45.8 | 24 | 15.1 |
| | 41 | PS | 18 | 30.7 | 28 | 37.7 | 10 | 7.0 |
| Fox 7/8P-8 | 40 | WK | 24 | 35.1 | 26 | 36.5 | 2 | 1.4 |
| | 40 | RD | 18 | 30.7 | 66 | 58.7 | 48 | 28.0 |
| | 35 | AC | 20 | 32.3 | 34 | 41.3 | 14 | 9.0 |
| | 35 | PS | 24 | 35.1 | 40 | 44.7 | 16 | 9.6 |
| Quirk-7 | 81 | WK | 12 | 25.3 | 24 | 35.1 | 12 | 9.8 |
| | 81 | RD | 14 | 27.2 | 26 | 36.5 | 12 | 9.3 |
| | 81 | AC | 24 | 35.1 | 38 | 43.6 | 14 | 8.5 |
| | 81 | PS | 22 | 33.7 | 38 | 43.6 | 16 | 9.9 |
| Quirk-8 | 81 | WK | 20 | 32.3 | 26 | 36.5 | 6 | 4.2 |
| | 81 | RD | 14 | 27.2 | 24 | 35.1 | 10 | 7.9 |
| | 82 | AC | 18 | 30.7 | 44 | 46.8 | 26 | 16.1 |
| | 81 | PS | 14 | 27.2 | 30 | 39.0 | 16 | 11.8 |

While the fall to spring test data showed statistically significant mean gain patterns which generally exceeded the criterion standard, the analysis of mean percentile placement and NCE changes was even more substantive. When team data were analyzed on a grade-by-grade level, in only four cases (out of a possible 40) were the three percentile gain standards not met. These exceptions were the Fox 7/8F eighth graders in Word Knowledge, the Fox 7/8D eighth graders in Arithmetic Computation, WHS ninth graders in Reading Comprehension, and the HPHS tenth graders in Problem Solving. All produced evidences of gain, although not at the specified standard.

When these same percentiles were converted to NCEs and the gains assessed, changes seemed even more substantial. If one remembers that NCEs represent an equidistant scale, whereas percentiles are spread out at the scale ends and "scrunched" together in the middle, an overall pattern of gain is apparent. On the percentile scale, these changes might be due to scale characteristics, rather than to the effects of the program. Since recent citations in the literature indicate any gain is a salutary one, and that mean gains of three or more NCEs probably represent substantial changes imparted by the program, gains of at least 3 NCEs could be reported in 34 out of 40 cases. Using a more conservative 7 NCE standard which researchers (Tallmadge & Wood, 1976) have used to characterize educationally significant gain, in only 11 out of the 40 cases was even this more conservative standard not met. No matter how you slice it, for the program, the teams, and on a vast majority of the subtests, evidences of gain exceeding the various standards were recorded, and the objective reported as having been attained.

Objective 2: Students...will achieve...a better percentage of attendance ..than that of the hosting school grade level.

Because a static percentage criterion worked against the teams and schools where good attendance is stressed, a variable attendance criterion was developed. The various standards which were modified on the basis of the 1978-79 evaluation report, together with team attainments, are shown in Table 10. While team percentages of attendance were to have been compared with those of the hosting school, neither current end-of-year nor interim percentages were available. Instead, the listed criterion was used. Note that in all cases, team gains exceeded the established goal to the point that the objective could be reported as having been attained and the standard exceeded.

Table 11

Comparison of HH100 Attendance Percentages with School and Grade Criterion, School Year 1979 - 1980

| Team | Host School Standard | Desired Gain | Attendance | Gain Dif. |
|---|---|---|---|---|
| HPHS-10 | 77 | 90 | 92.8 | 2.8 |
| HPHS-9 | 77 | 90 | 95.1 | 5.1 |
| WHS-9 | 78 | 90 | 94.4 | 4.4 |
| BHS-9 | 83 | 90 | 92.0 | 2.0 |
| Fox 7/8D | 87 | 92 | 93.8 | 1.8 |
| Fox 7/8P | 87 | 92 | 95.8 | 3.8 |
| Quirk-7 | 84 | 90 | 94.3 | 4.3 |
| Quirk-8 | 84 | 90 | 93.0 | 3.0 |
| Total | 82.1 | 90.5 | 93.9 | 3.4 |

Objective 3. Students...will acquire a realistic and positive attitude toward themselves and school.

To measure this objective a Pupil Rating Form (PRF) was administered at the end of the school year. This Form addressed three areas of concern. The first section contained 15 self-rating items covering areas where HH100 may have helped the student during the school year. A second section asked the youngsters to assess their personal and scholastic growth in class, following through on assignments, and getting along with other youngsters. The third area contained four open-ended questions where students were asked to identify the part of HH100 which provided the most and least help and to list what they liked best and disliked most. Questionnaires were coded on data processing sheets for aggregation in terms of the program as a whole. Because of an error in coding, the Quirk grade 8 team data were not included in the overall analysis. The overall analysis is shown in Table 12 and the supplementary Quirk analysis in Table 13.

Table 12

Analysis of 7 HH100 Team Program Rating Form Responses, Spring 1980

| | Much | Some | None | Some Adverse Effects | Cannot Judge | N |
|---|---|---|---|---|---|---|
| Do you think Higher Horizons has helped you so far this year to: | | | | | | |
| 1. Improve your reading ability? | ____ | 4.4 | ____ | ____ | ____ | 512 |
| 2. Improve your study habits? | ____ | 4.2 | ____ | ____ | ____ | 512 |
| 3. Improve your attitude toward learning? | ____ | 4.4 | ____ | ____ | ____ | 514 |
| 4. Improve your classroom behavior? | ____ | 4.1 | ____ | ____ | ____ | 511 |
| 5. Improve your out-of-class behavior? | ____ | 3.9 | ____ | ____ | ____ | 510 |
| 6. Improve your getting along with your teachers? | ____ | 4.3 | ____ | ____ | ____ | 511 |
| 7. Learn more about yourself? | ____ | 4.1 | ____ | ____ | ____ | 511 |
| 8. Get specific help with your school work. | ____ | 4.1 | ____ | ____ | ____ | 513 |
| 9. Get help in working out your personal problems? | ____ | 3.7 | ____ | ____ | ____ | 513 |
| 10. Work toward a high school diploma? | ____ | 4.3 | ____ | ____ | ____ | 508 |
| 11. Look forward to an education training beyond high school? | ____ | 4.4 | ____ | ____ | ____ | 513 |
| 12. Identify some talents and interests which are other than academic? | ____ | 3.9 | ____ | ____ | ____ | 510 |
| 13. Expect to achieve at a higher level in school? | ____ | 4.4 | ____ | ____ | ____ | 507 |
| Do you think Higher Horizons has: | | | | | | |
| 14. Increased your parents' interest in your school? | ____ | 4.0 | ____ | ____ | ____ | 511 |
| 15. Improved your parents' interest in your school work? | ____ | 4.3 | ____ | ____ | ____ | 508 |

| How would you rate yourself? | All the time | Most of the time | Only some times | Never | Cannot Judge | N |
|---|---|---|---|---|---|---|
| 16. I do my homework. | | 4.0 | | | | 513 |
| 17. I do not disturb others in the class when they are working. | | 3.6 | | | | 511 |
| 18. I can easily explain my ideas to others. | | 3.7 | | | | 509 |
| 19. I take part in class discussions. | | 3.7 | | | | 508 |
| 20. I want to learn and to improve myself. | 4.5 | | | | | 508 |
| 21. When I come to school I am ready for the lesson and the tests of the day. | | 3.9 | | | | 509 |
| 22. I feel I am doing better in classwork. | | 4.1 | | | | 510 |
| 23. I get along with the other students in my class. | | 4.4 | | | | 510 |
| 24. I finish my work on time. | | 4.0 | | | | 508 |
| 25. I have confidence in myself. | | 4.4 | | | | 508 |
| 26. I do the very best I can. | | 4.3 | | | | 512 |
| 27. I do my work without having to be told to do it. | | | | | | |

Table 13

Analysis of Quirk Eighth Grade Program Rating Form Responses
Spring 1980

| | Much | Some | None | Some Adverse Effects | Cannot Judge | N |
|---|---|---|---|---|---|---|
| Do you think Higher Horizons has helped you so far this year to: | | | | | | |
| 1. Improve your reading ability? | 4.6 | | | | | 50 |
| 2. Improve your study habits? | | 4.4 | | | | 50 |
| 3. Improve your attitude toward learning? | 4.6 | | | | | 50 |
| 4. Improve your classroom behavior? | | 4.3 | | | | 50 |
| 5. Improve your out-of-class behavior? | 4.5 | | | | | 50 |
| 6. Improve your getting along with your teachers? | 4.6 | | | | | 50 |
| 7. Learn more about yourself? | 4.5 | | | | | 50 |
| 8. Get specific help with your school work. | | 4.3 | | | | 50 |
| 9. Get help in working out your personal problems? | | 3.8 | | | | 50 |
| 10. Work toward a high school diploma? | 4.7 | | | | | 50 |
| 11. Look forward to an education training beyond high school? | 4.7 | | | | | 50 |
| 12. Identify some talents and interests which are other than academic? | | 4.1 | | | | 50 |
| 13. Expect to achieve at a higher level in school? | 4.6 | | | | | 50 |
| Do you think Higher Horizons has: | | | | | | |
| 14. Increased your parents' interest in your school? | 4.6 | | | | | 50 |
| 15. Improved your parents' interest in your school work? | 4.5 | | | | | 50 |

| How would you rate yourself? | All the time | Most of the time | Only some times | Never | Cannot Judge | N |
|---|---|---|---|---|---|---|
| 16. I do my homework. | | 4.3 | | | | 50 |
| 17. I do not disturb others in the class when they are working. | | 3.6 | | | | 50 |
| 18. I can easily explain my ideas to others. | | 3.8 | | | | 50 |
| 19. I take part in class discussions. | | 4.0 | | | | 50 |
| 20. I want to learn and to improve myself. | 4.7 | | | | | 50 |
| 21. When I come to school I am ready for the lesson and the tests of the day. | | 4.0 | | | | 50 |
| 22. I feel I am doing better in classwork. | 4.6 | | | | | 50 |
| 23. I get along with the other students in my class. | 4.6 | | | | | 50 |
| 24. I finish my work on time. | | | 4.3 | | | 50 |
| 25. I have confidence in myself. | 4.6 | | | | | 50 |
| 26. I do the very best I can. | 4.6 | | | | | 50 |
| 27. I do my work without having to be told to do it. | | 4.2 | | | | 50 |

While it was possible to analyze objective pupil ratings by computer, the analysis of question data required a different procedure. First, comments were tallied, categorized, and converted to percentages. While it was assumed that the submitted forms matched those which had been coded and analyzed, it was not possible to marry-up objective and subjective data since many of the forms were anonymous. This minor technical problem probably had no impact on the final array of data.

In terms of the question, "What part of Higher Horizons do you think has helped you most?", about 26% of the responses indicated reading, while 21% opted for math, about 20% for English, and about 6% for social studies. Other listings were scattered and could not be categorized to the point that any substantial consensus could be reported. While the percentages may seem less than significant, it should be noted that the number of student ratings reported for reading, math, and English, ranged from 132 to 166 with each subject affirmed by an equivalent of a complete team. These data strongly suggest a high degree of student appreciation of the academic impact of the HH100 program.

When students were asked what they liked most about the Higher Horizons program, comments were spread across the board. About 26% of the comments listed the teachers in general, followed by 10% noting trips, and about 4% reporting either math, learning more, the students, or everything. The point that the teachers were liked also seemed to be in keeping with the overall tenor of the program.

Students were asked what they liked least about Higher Horizons and about 7% reported homework, 6% science, and 2% rated either too much work, teachers, trips, or mathematics. 15% indicated that nothing was disliked. Comments in

other areas were scattered and could not be categorized.

Suggestions for improving the Higher Horizons program were also fragmented, and scattered across the board. For the largest category reporting, 89 youngsters indicated that nothing should be changed or improved; 54 noted that more trips would be helpful; and 33 reported a need for new or more books. Nineteen students requested more work, 12 less work, and the need to get more kids involved, and 10 to take troublemakers out of the program. Other comments fell into the singleton category.

Given the foregoing objective and subjective information, it would appear that HH100 students were generally supportive to the program, they viewed HH100 as having been of help in several ways, and they seemed to exude a rather positive perception of themselves in relationship to school and to their academic future. The objective then appears to have been attained.

2. Were services provided in accord with the funding proposal?

On the basis of submitted data, an analysis of pupil eligibility information, and the team liaison's final report it would appear that HH100 operated substantially in accord with the funding proposal over the course of the school year. Staffing problems have already been cited.

With reference to pupil eligibility, the pre test scores were lower than in previous years thus indicating that services were being provided to the more educationally disadvantaged youngsters. Increasing numbers of youngsters are continuing to receive additional years of HH100 service following a pattern which was first established at the middle schools. The liaison reported that various numbers of students continued to read below grade level following one or more

years of project services. He also noted that many of these students were supported by their parents in realizing the advantageous nature of the HH100 concept, and specifically requested that the youngsters remain in the program. Even so, specific criteria for continuation in the program should be made a part of the proposal.

In the 1978-79 evaluation, it was reported that substantial numbers of high school youngsters were in their third year of HH100 services, particularly at HPHS and at WHS, and that two years of service was the general middle school rule. For 1979-80, reported enrollment patterns were as follows.

Table 14

Analysis of Enrollments by Year, 1979 - 1980

| Team | 1st Year | 2nd Year | 3rd Year | 4th Year | Other |
|---|---|---|---|---|---|
| HPHS-10 | 63 | 21 | 3 | 13 | |
| HPHS-9 | 58 | 4 | 21 | 2 | 1 |
| WHS-9 | 55 | 2 | 35 | | |
| BHS-9 | 87 | | | | |
| Fox 7/8D | 47 | 44 | | | |
| Fox 7/8P | 57 | 38 | | | |
| Quirk-7 | 90 | | | | |
| Quirk-8 | 23 | 68 | | | |
| *Program Total % | 65.4 | 24.4 | 8.0 | 2.0 | |

*Percentages have been rounded and will not equal 100%.

As coded, Table 14 enrollment figures indicate that the percentage of youngsters spending one or more successive years in HH100 is comparable to the figures reported for the preceding school year. Higher Horizons is essentially a multi-year program. There are, however, some caveats to the data. For at least one team, the number of youngsters in successive years appears to have been coded incorrectly. Since it was not practical for the team leader to correct these data during the middle summer, the figures were reported as coded. Since evaluative output is only as good as the input, all figures and associated data should be carefully scrutinized before they are submitted next year.

In terms of overall enrollment figures, again team numbers are comparable to those which were reported last year. No attrition rates or problems with attrition were reported. Whether the question of team underenrollment continued to remain a problem was not ascertained.

Conclusions and Recommendations

In order to set the stage for making recommendations, two tasks must be completed. The HH100 accomplishments of the school year must be summarized for the convenience of the reader, and the status of the 1978-79 recommendations must be brought up to date.

As was noted in the evaluation section, HH100 youngsters were tested from fall to spring on either the MAT or the CTBS. In the majority of cases gains were statistically significant, with only two teams not reaching the stated gain level and in these cases on only one out of four subtests. When spring to spring MAT test scores were analyzed, data representing about 91% of those tested, and about 73% of the overall HH100 enrollment produced gains which again generally exceeded

the projected standard. While fall to spring gains were slightly higher, the overall gain patterns were comparable with only four teams failing to meet the standard, and again on only one out of four subtests. When the fall to spring scores were converted to relative percentile placements, changes in 36 out of 40 cases produced at least a three percentile gain. When percentile data were converted to normal curve equivalent scores (NCEs), on 34 out of 40 subtest cases gains of at least 3 NCEs were achieved.

In common with previous year ratings, pupil reactions to the HH100 program seemed positive, realistic, and generally attuned to the academic impact of the program.

Using a more rigorous sliding attendance standard. All team attendance averages exceeded 90%, with a program average of 93.9 reported. Gains above various school standards ranged from 1.8 to 5.1 percentage points.

Finally, the percentage of youngsters remaining in HH100 for more than one year was generally the same as that reported in 1978-79, while overall team enrollments were also comparable to last year's figures.

Given the foregoing as preamble, a series of updated recommendations are in order:

1. HH100 accomplishments were, to say the least, salutary ones. They demonstrate once again the program's 15 year tenure of success. Even so, a systematic longitudinal program evaluation continues to be needed. While the team liaison reported that both of the HPHS teams plan to conduct a longitudinal study of former HH100 students during their junior and senior years using a survey form to measure program impact, more precise data are needed. The evaluation

should not be limited to a study of perceptions, but should also consider other indications of student gain; perhaps grade point averages, accomplishments in school and non-school activities, movement from academic level to level, and even standardized test scores if high school testing is instituted should be considered. As was noted last year, this study should also provide a base for looking at post graduation accomplishments. While the plans made by the HPHS team should be applauded, further planning is still needed and all teams should be brought into the act. If the overall study is started at the middle school level, this is still another reason for total team involvement.

2. For the preceding year, the question of how much is too much testing was raised in the evaluation. This issue was based on the similarities between spring and fall MAT test results. While the team liaison reported that the elimination of September testing would create problems since a large number of spring MAT scores do not reach the teams until somewhat later in the year, two suggestions are in order. Testing and guidance offices should be contacted to see if the problem of late arriving scores can be resolved since late arriving scores cannot be used for placement purposes. Perhaps the transmittal system can be improved. If this system can be improved, a long-range consideration should still be given to the elimination of fall testing on the youngsters who have current MAT scores. While this suggestion may not be practical next year, it should be noted that both the evaluation and testing offices are pushing to have MAT data included in the pupil information file. Once this file becomes operational, current test data should be readily available. While this may not happen during the 1980-81 school year, the possibility of spring test score availability should be considered by the teams in

their planning.

3. Using a more realistic and rigorous attendance scale which no longer penalizes a team in a host school where good attendance is stressed, attendance of HH100 accomplishments continued to be prodigious with the standard for each team met. Because no up to date school attendance percentages were reported, and since these standards can be expected to vary on a year-by-year basis, the current attendance scale should be maintained. It should, however, be constantly assessed in terms of current data, and if necessary, adjusted at the end of any given school year.

4. A suggested modification to the objective concerned with the assessment of affective change was made by indicating that a realistic, rather than a more realistic attitude, would be achieved by the program. This seemed a reasonable change since the liaison indicated that pre to post-testing was impractical. The recommendation that a check point form be used to structure open-ended statements together with a "why" question also be considered although these suggestions are not crucial to program success.

5. Several of the staffing recommendations have been completed. The two vacant paraprofessional positions were filled during the year and a creative writing teacher was assigned to the Quirk teams on a half-time basis. Consideration should be given to increasing this or other supplementary services at Quirk to fulltime so as to meet the 1 full position requirement. Further, the counselor serving the Quirk teams should be transferred to Title I funding, and the guidance team leader transferred to GB.

6. No problems were reported with respect to the use of Title I staff for

non-Title I services during the year. Should this become a problem, both Title I director and the project director should be notified, and in writing immediately. While regulations do provide some leeway in service patterns, these must be kept to a minimum and in accord with applicable rules and regulations.

7. No information was submitted with respect to initial student enrollments or attrition. Since spring enrollment figures were somewhat comparable to those reported in the fall of the preceding year, it would appear that the team dropout rates are relatively low, and that team enrollments were closer to strength. Should underenrollments occur, than the 1978-79 evaluation recommendations should be seriously considered. These are repeated for information purposes only.

- Each team should select from 106 to 115 eligible candidates, process them into various teams, and allow normal attrition to reduce the numbers to the target level of 100. Past experience has shown that a limited amount of "over-booking" is not detrimental to the program; conversely, neither is there evidence that "under-booking" increases the quality of instructional services although it certainly reduces the number of available student slots.

- The feasibility of establishing a district-wide pool of eligible HH100 applicants and of inter-district enrollments might be considered, and particularly in instances where one or more teams are experiencing recruitment problems.

- The issue of full enrollment should continue to be a focus of ensuing year evaluations with strategies, problem areas, and solutions recorded and reported.

8. Finally, it is a pleasure to report that HH100 is being considered for selection as a State validated program. Hopefully, this selection can be reported

over the course of the project year. Selection may lead to the replication of HH100 by other districts. Should this happen, it may be possible to collect common data from the various sites and use this information for overall program improvement. Whether or not this occurs, a minor but important point should be considered. Attention should be given to the collection and reporting of data during the school year to insure that they are complete, accurate, and responsive program accomplishment. There were some problems this year and while a majority of these were worked out, some still persist. These should be corrected.

Robert J. Nearine
Evaluation Office
August 7, 1980
.-.-.

# 1979-80 COMPENSATORY PROJECT EVALUATION REPORTING FORM

PLEASE SUBMIT
TWO COPIES

THIS REPORT IS DUE 6/20/80

C.S.D.E.
State Office Bldg., Rm. 375
P.O. Box 2219
Hartford, Connecticut 06115

School District: Hartford Public Schools

District Address: 249 High St., Hartford, CT. 06103

Project Title: Higher Horizons 100

Director: John Shea (566-6594) - John DiBenedetto (525-1971)
(Name) (Telephone)

Evaluator: Robert J. Nearine 566-6074
(Name) (Telephone)

Program Site(s): HPHS (2 teams), Weaver High School, Bulkeley High School, Fox Middle School (2 teams), and Quirk Middle School (2 teams).

(1-3)
(5-6)
(8-9)
(11-12)

Funds supporting this component:

| | | |
|---|---|---|
| Title I: | 342,785 | (14-20) |
| SADC public: | | (22-27) |
| SADC non-public: | | (29-34) |
| Other (specify): | | (36-42) |
| TOTAL: | 342,785 | |

Expenditures included in Total above which supported services to private school children: N/A (44-49)/

Unduplicated count of program participants by grade levels:

PUBLIC SCHOOL

| PK | K | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | TOTALS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| (8-10) | (12-14) | (16-18) | (20-22) | (24-26) | (28-30) | (32-34) | (36-38) | 186 (40-42) | 180 (44-46) | 268 (48-50) | 93 (52-54) | (56-58) | (60-62)/ | 727 |

PRIVATE SCHOOL

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| X | (12-14) | (16-18) | (20-22) | (24-26) | (28-30) | (32-34) | (36-38) | (40-42) | (44-46) | (48-50) | (52-54) | (56-58) | (60-62)/ | |

Number and full-time equivalent of project staff paid by compensatory funds:

| | Instructional No. | Instructional f.t.e. | Other Professional (Specify) | Other Professional No. | Other Professional f.t.e. | Clerical or Other (Specify) | Clerical or Other No. | Clerical or Other f.t.e. |
|---|---|---|---|---|---|---|---|---|
| Teachers | 9 (8-9) | 9 (11-15) | Counselors | 4 | 4 | | | |
| Aides | 8 (18-19) | 8 (21-25) | | | | | | |
| | | | | (28-29) | (31-35) | | (38-39) | (41-45) |

32

*32 teaching positions are supported by the General Budget.

33

School District Hartford Component Title Higher Horizon 100 

Using this page, (1) State the performance objectives for this component (from the Application); (2) Specify the measure(s) used to evaluate each objective; (3) Indicate the method of analysis applied to the data collected with each instrument; (4) Present the results of the evaluation. At the foot of the page state one or more program recommendations based on the evaluation findings.

| PERFORMANCE OBJECTIVES | DATES INSTRUMENTS/ADMINISTERED | TREATMENT OF DATA INCLUDING TESTS FOR SIGNIFICANCE | RESULTS |
|---|---|---|---|
| 1. Students will on the average make ... gains of ... 3%ile points in reading and in math. | CTBS, MAT | Related t-test at the .05 level comparison of %ile gains with standard analysis of NCE changes | All gains reached or exceeded the significance level except for Fox 7/8/9 and WHS teams on reading comprehension. 3%ile and 3 NCEs were reported on 34 and 36 out of 40 subtests, respectively. The objectives were attained. |
| 2. Students will on the average make a better percentage of attendance ... than the hosting school grade level. | Annual attendance figures. | Comparison of mean team attendance with scale. See page 19. | A mean percentage of 93.9 exceeding the program standard of 3.4 percentage points was attained. Each team also exceeded the established standard from 1.8 to 5.1 points. The objective was attained and the standard exceeded. |
| 3. Students will acquire a realistic and positive attitude toward themselves and school. | Pupil Rating Form spring | Tabulation of ratings of percentages | Pupil reactions to HH 100 were positive, realistic, and generally attuned to the academic side of the program. The objective was attained. |

RECOMMENDATIONS:

See page 23.
Page 3 does not apply and is omitted.

School District Hartford (1-3) Component Title Higher Horizons 100 (4-8)

FOR BASIC SKILLS PROJECTS WHICH SERVED PUPILS AT OR ABOVE GRADE TWO, USE THIS PAGE

1. INSTRUCTIONAL SERVICE (Check One) ■ READING □ LANGUAGE ARTS □ MATH (9)
2. TYPE OF NORMS USED IN SCORE CONVERSIONS ■ NATIONAL □ OTHER _____ (Specify) (10)
3. WAS THE PRETEST INSTRUMENT USED TO SELECT PROGRAM PARTICIPANTS? ■ NO □ YES → (see instructions) (11)
4. TESTING PATTERN (12)
   - ■ Fall to Spring
   - □ Spring to Spring
   - □ Fall to Fall
   - □ More than 12 months

| Column A | Column B | Column C | TEST INFORMATION | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Grade Level | No. of Pupils Who Received Instructional Services | No. of Pupils Pre/Post-tested | Name of Test | Edition (year) | Name of Subtest | Pre/Post Battery Level | Pre/Post Form | Month of Pre/Post Tests | Pre Test $\bar{X}$ S.S. | Post Test $\bar{X}$ S.S. |
| 7 | 186 | 123 | MAT | 1970 | WK | Adv / Adv | H / H | Sept / May | 70.5 | 78.4 |
| 8 | 180 | 121 | MAT | 1970 | WK | Adv / Adv | H / H | Sept / May | 79.7 | 84.7 |
| 9 | 268 | 223 | MAT | 1970 | WK | Adv / Adv | H / H | Sept / May | 83.1 | 95.3 |
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| | | | | | | | | | | |
| (13-14) | (15-16) 639 Total Served | (17-18) 467 Total Pre/ Post Tested | | | | | | | | |

Continued→

(continued from p. 4) FOR BASIC SKILLS PROJECTS WHICH SERVED PUPILS AT OR ABOVE GRADE TWO

Weighted mean project gain:

Total, Column G ÷ Total, Column C = 16.6

(Check One)
- [ ] Reading
- [ ] Language Arts
- [ ] Mathematics

| Column D | | Column E | | Column F | Column G | |
|---|---|---|---|---|---|---|
| Associated Percentiles | | Associated N.C.E.s (or x N.C.E.) | | N.C.E. Gain | Weighted N.C.E. Gain= (col. C x col. F) | CSDE USE ONLY |
| Pre | Post | Pre | Post | | | |
| 12 | 26 | 25.3 | 36.5 | 11.2 | 1377.6 | |
| 20 | 26 | 32.3 | 36.5 | 4.2 | 508.2 | |
| 20 | 50* | 32.3 | 50.0 | 21.9 | 5869.2 | |
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| | (19-20) | | (21-22) | | 7755.0 Total | (23-30) |



* Beginning grade 9 norms.

School District Hartford (1-3) Component Title Higher Horizons 100 (4-8)

FOR BASIC SKILLS PROJECTS WHICH SERVED PUPILS AT OR ABOVE GRADE TWO, USE THIS PAGE

1. INSTRUCTIONAL SERVICE (Check One) ■ READING ☐ LANGUAGE ARTS ☐ MATH (9)
2. TYPE OF NORMS USED IN SCORE CONVERSIONS ■ NATIONAL ☐ OTHER (Specify) (10)
3. WAS THE PRETEST INSTRUMENT USED TO SELECT PROGRAM PARTICIPANTS? ■ NO ☐ YES → (see instructions) (11)
4. TESTING PATTERN (12)
   - ■ Fall to Spring
   - ☐ Spring to Spring
   - ☐ Fall to Fall
   - ☐ More than 12 months

| Column A | Column B | Column C | TEST INFORMATION | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Grade Level | No. of Pupils Who Received Instructional Services | No. of Pupils Pre/Post-tested | Name of Test | Edition (year) | Name of Subtest | Pre/Post Battery Level | Pre/Post Form | Month of Pre/Post Tests | Pre Test $\bar{X}$ S.S. | Post Test $\bar{X}$ S.S. |
| 7 | 186 | 123 | MAT | 1970 | RD | ADV / ADV | H / H | Sept / May | 69.0 | 77.6 |
| 8 | 180 | 121 | MAT | 1970 | RD | ADV / ADV | H / H | Sept / May | 76.0 | 88.8 |
| 9 | 260 | 229 | MAT | 1970 | RD | ADV / ADV | H / H | Sept / May | 80.1 | 89.0 |
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| | | | | | | | | | | |
| (13-14) | (15-16) | (17-18) | | | | | | | | |
| | 626 Total Served | 473 Total Pre/ Post-Tested | | | | | | | | |

Continued

(continued from p. 4) FOR BASIC SKILLS PROJECTS WHICH SERVED PUPILS AT OR ABOVE GRADE TWO

Weighted mean project gain:

Total, Column G ÷ Total, Column C = 12.7

(Check One)
- [x] Reading
- [ ] Language Arts
- [ ] Mathematics

| Column D | | Column E | | Column F | Column G | |
|---|---|---|---|---|---|---|
| Associated Percentiles | | Associated N.C.E.s (or $\bar{x}$ N.C.E.) | | N.C.E. Gain | Weighted N.C.E. Gain= (col. C x col. F) | CSDE USE ONLY |
| Pre | Post | Pre | Post | | | |
| 12 | 24 | 25.3 | 35.1 | 9.8 | 1205.4 | |
| 16 | 38 | 29.1 | 43.6 | 14.5 | 1754.5 | |
| 16 | 36* | 29.1 | 42.5 | 13.4 | 3068.6 | |
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| | (19-20) | | (21-22) | | 6028.5 Total | (23-30) |

* Beginning grade 9 norms

School District Hartford (1-3) Component Title Higher Horizons 100 (4-8)

FOR BASIC SKILLS PROJECTS WHICH SERVED PUPILS AT OR ABOVE GRADE TWO, USE THIS PAGE

1. INSTRUCTIONAL SERVICE (Check One) ☐ READING ☐ LANGUAGE ARTS ■ MATH (9)
2. TYPE OF NORMS USED IN SCORE CONVERSIONS ■ NATIONAL ☐ OTHER (Specify) (10)
3. WAS THE PRETEST INSTRUMENT USED TO SELECT PROGRAM PARTICIPANTS? ■ NO ☐ YES → (see instructions) (11)
4. TESTING PATTERN (12)
   - ■ Fall to Spring
   - ☐ Spring to Spring
   - ☐ Fall to Fall
   - ☐ More than 12 months

| Column A | Column B | Column C | TEST INFORMATION | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Grade Level | No. of Pupils Who Received Instructional Services | No. of Pupils Pre/Post-tested | Name of Test | Edition (year) | Name of Subtest | Pre/Post Battery Level | Pre/Post Form | Month of Pre/Post Tests | Pre Test $\bar{X}$ S.S. | Post Test $\bar{X}$ S.S. |
| 7 | 186 | 122 | MAT | 1970 | AC | Adv / Adv | H / H | Sept / May | 84.2 | 94.9 |
| 8 | 180 | 117 | MAT | 1970 | AC | Adv / Adv | H / H | Sept / May | 89.7 | 99.2 |
| 9 | 268 | 225 | MAT | 1970 | AC | Adv / Adv | H / H | Sept / May | 94.3 | 100.3 |
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44 (13-14) (15-16) 634 Total (17-18) 424 Total Pre/ Post Tested

(continued from p. 4) FOR BASIC SKILLS PROJECTS WHICH SERVED PUPILS AT OR ABOVE GRADE TWO

Weighted mean project gain:

Total, Column G ÷ Total, Column C = 11.3

(Check One)
- ☐ Reading
- ☐ Language Arts
- ■ Mathematics

| Column D | | Column E | | Column F | Column G | |
|---|---|---|---|---|---|---|
| Associated Percentiles | | Associated N.C.E.s (or ≈ N.C.E.) | | N.C.E. Gain | Weighted N.C.E. Gain= (col. C x col. F) | CSDE USE ONLY |
| Pre | Post | Pre | Post | | | |
| 22 | 38 | 33.7 | 43.6 | 9.9 | 1207.8 | |
| 18 | 40 | 30.7 | 44.7 | 14.0 | 1638.0 | |
| 18 | 34* | 30.7 | 41.3 | 10.6 | 2385.0 | |
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| | (19-20) | | (21-22) | | 5230.8 Total | (23-30) |

* Beginning grade 9 norms.

School District Hartford (1-3) Component Title Higher Horizons 100 (4-8)

FOR BASIC SKILLS PROJECTS WHICH SERVED PUPILS AT OR ABOVE GRADE TWO, USE THIS PAGE

1. INSTRUCTIONAL SERVICE (Check One) ☐ READING ☐ LANGUAGE ARTS ■ MATH (9)
2. TYPE OF NORMS USED IN SCORE CONVERSIONS ■ NATIONAL ☐ OTHER (Specify) (10)
3. WAS THE PRETEST INSTRUMENT USED TO SELECT PROGRAM PARTICIPANTS? ■ NO ☐ YES → (see instructions) (11)
4. TESTING PATTERN (12)
   - ■ Fall to Spring
   - ☐ Spring to Spring
   - ☐ Fall to Fall
   - ☐ More than 12 months

| Column A | Column B | Column C | TEST INFORMATION | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Grade Level | No. of Pupils Who Received Instructional Services | No. of Pupils Pre/Post-tested | Name of Test | Edition (year) | Name of Subtest | Pre/Post Battery Level | Pre/Post Form | Month of Pre/Post Tests | Pre Test $\bar{x}$ S.S. | Post Test $\bar{x}$ S.S. |
| 7 | 186 | 122 | MAT | 1970 | PS | Adv / Adv | H / H | Sept / May | 77.0 | 88.3 |
| 8 | 180 | 116 | MAT | 1970 | PS | Adv / Adv | H / H | Sept / May | 83.6 | 92.6 |
| 9 | 268 | 226 | MAT | 1970 | PS | Adv / Adv | H / H | Sept / May | 90.8 | 95.3 |
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| (13-14) | (15-16) | (17-18) | | | | | | | | |
| | 634 Total | 464 Total Pre/ Post-Tested | | | | | | | | |

Continue

(continued from p. 4) FOR BASIC SKILLS PROJECTS WHICH SERVED PUPILS AT OR ABOVE GRADE TWO

Weighted mean project gain:

Total, Column G / Total, Column C = 11.2

(Check One)
- [ ] Reading
- [ ] Language Ar
- [x] 4. Mathematics

| Column D | | Column E | | Column F | Column G | |
|---|---|---|---|---|---|---|
| Associated Percentiles | | Associated N.C.E.s (or ≈ N.C.E.) | | N.C.E. Gain | Weighted N.C.E. Gain= (col. C x col. F) | CSDE USE ONLY |
| Pre | Post | Pre | Post | | | |
| 16 | 30 | 29.1 | 39.0 | 9.9 | 1841.4 | |
| 16 | 30 | 29.1 | 39.0 | 9.9 | 1782 | |
| 12 | 20* | 25.3 | 32.3 | 7.0 | 1582 | |
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| | | (19-20) | (21-22) | | 5205.4 Total | (23-30) |

* Beginning grade 9 norms

School District Hartford (1-3) Component Title Higher Horizons 100 (4-8)

FOR BASIC SKILLS PROJECTS WHICH SERVED PUPILS AT OR ABOVE GRADE TWO, USE THIS PAGE

1. INSTRUCTIONAL SERVICE (Check One) ■ READING ☐ LANGUAGE ARTS ☐ MATH (9)

2. TYPE OF NORMS USED IN SCORE CONVERSIONS ■ NATIONAL ☐ OTHER (Specify) (10)

3. WAS THE PRETEST INSTRUMENT USED TO SELECT PROGRAM PARTICIPANTS? ■ NO ☐ YES → (see instructions) (11)

4. TESTING PATTERN (12)
- ■ Fall to Spring
- ☐ Spring to Spring
- ☐ Fall to Fall
- ☐ More than 12 months

| Column A | Column B | Column C | TEST INFORMATION | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Grade Level | No. of Pupils Who Received Instructional Services | No. of Pupils Pre/Post-tested | Name of Test | Edition (year) | Name of Subtest | Pre/Post Battery Level | Pre/Post Form | Month of Pre/Post Tests | Pre Test $\bar{X}$ S.S. | Post Test $\bar{X}$ S.S. |
| 10 | 93 | 75 | CTBS | 1973 | Vocab | 4 / 4 | S / S | May / Sept | 511.6 | 549.2 |
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| (13-14) | (15-16) | (17-18) | | | | | | | | |
| | 93 Total | 75 Total Pre/ Post-Tested | | | | | | | | |

Continued-

School District Hartford Component Title Higher Horizons 100 Page 5

(continued from p. 4) FOR BASIC SKILLS PROJECTS WHICH SERVED PUPILS AT OR ABOVE GRADE TWO

Weighted mean project gain:

Total, Column G ÷ Total, Column C = 2.1

(Check One)
- [x] Reading
- [ ] Language Arts
- [ ] Mathematics

| Column D: Associated Percentiles | | Column E: Associated N.C.E.s (or x N.C.E.) | | Column F: N.C.E. Gain | Column G: Weighted N.C.E. Gain= (col. C x col. F) | CSDE USE ONLY |
|---|---|---|---|---|---|---|
| Pre | Post | Pre | Post | | | |
| 22 | 25 | 33.7 | 35.8 | 3.1 | 157.5 | |
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| | | (19-20) | (21-22) | | 157.5 Total | (23-30) |

School District Hartford (1-3) Component Title Higher Horizons 100 (4-8)

FOR BASIC SKILLS PROJECTS WHICH SERVED PUPILS AT OR ABOVE GRADE TWO, USE THIS PAGE

1. INSTRUCTIONAL SERVICE (Check One) ■ READING ☐ LANGUAGE ARTS ☐ MATH (9)
2. TYPE OF NORMS USED IN SCORE CONVERSIONS ■ NATIONAL ☐ OTHER (Specify) (10)
3. WAS THE PRETEST INSTRUMENT USED TO SELECT PROGRAM PARTICIPANTS? ■ NO ☐ YES (see instructions) (11)
4. TESTING PATTERN (12)
   - ■ Fall to Spring
   - ☐ Spring to Spring
   - ☐ Fall to Fall
   - ☐ More than 12 months

| Column A | Column B | Column C | TEST INFORMATION | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Grade Level | No. of Pupils Who Received Instructional Services | No. of Pupils Pre/Post-tested | Name of Test | Edition (year) | Name of Subtest | Pre/Post Battery Level | Pre/Post Form | Month of Pre/Post Tests | Pre Test $\bar{X}$ S.S. | Post Test $\bar{X}$ S.S. |
| 10 | 93 | 75 | CTBS | 1973 | Comp | 4 / 4 | S / S | May / May | 515.7 | 547.5 |
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| (13-14) | (15-16) | (17-18) | | | | | | | | |
| | 93 Total | 75 Total Pre/ | | | | | | | | |

Continued

School District Hartford Component Title Higher Horizons 100 Page 5

(continued from p. 4) FOR BASIC SKILLS PROJECTS WHICH SERVED PUPILS AT OR ABOVE GRADE TWO

Weighted mean project gain:

Total, Column G ÷ Total, Column C = 2.5

(Check One)
- [x] Reading
- [ ] Language Arts
- [ ] Mathematics

| Column D | | Column E | | Column F | Column G | |
|---|---|---|---|---|---|---|
| Associated Percentiles | | Associated N.C.E.s (or ≠ N.C.E.) | | N.C.E. Gain | Weighted N.C.E. Gain= (col. C x col. F) | CSDE USE ONLY |
| Pre | Post | Pre | Post | | | |
| 25 | 29 | 35.8 | 38.3 | 2.5 | 187.5 | |
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| | | (19-20) | (21-22) | | 187.5 Total | (23-38) |

School District Hartford (1-3) Component Title Higher Horizons 100 (4-8)

FOR BASIC SKILLS PROJECTS WHICH SERVED PUPILS AT OR ABOVE GRADE TWO, USE THIS PAGE

1. INSTRUCTIONAL SERVICE (Check One) ☐ READING ☐ LANGUAGE ARTS ■ MATH (9)
2. TYPE OF NORMS USED IN SCORE CONVERSIONS ■ NATIONAL ☐ OTHER (Specify) (10)
3. WAS THE PRETEST INSTRUMENT USED TO SELECT PROGRAM PARTICIPANTS? ■ NO ☐ YES → (see instructions) (11)
4. TESTING PATTERN (12)
   - ■ Fall to Spring
   - ☐ Spring to Spring
   - ☐ Fall to Fall
   - ☐ More than 12 months

| Column A | Column B | Column C | TEST INFORMATION | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Grade Level | No. of Pupils Who Received Instructional Services | No. of Pupils Pre/Post-tested | Name of Test | Edition (year) | Name of Subtest | Pre/Post Battery Level | Pre/Post Form | Month of Pre/Post Tests | Pre Test $\bar{X}$ S.S. | Post Test $\bar{X}$ S.S. |
| 10 | 93 | 76 | CTBS | 1973 | Compute | 4 / 4 | S / S | May / Sept | 495.9 | 524.4 |
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Continued-

60 (13-14) (15-16) 93 Total Served (17-18) 76 Total Pre/Post Tested

School District Hartford Component Title Higher Horizons 100 Page 5

(continued from p. 4) FOR BASIC SKILLS PROJECTS WHICH SERVED PUPILS AT OR ABOVE GRADE TWO

Weighted mean project gain:

Total, Column G ÷ Total, Column C = 4

(Check One)
- ☐ Reading
- ☐ Language Arts
- ■ Mathematics

| Column D | | Column E | | Column F | Column G | |
|---|---|---|---|---|---|---|
| Associated Percentiles | | Associated N.C.E.s (or ≈ N.C.E.) | | N.C.E. Gain | Weighted N.C.E. Gain= (col. C x col. F) | CSDE USE ONLY |
| Pre | Post | Pre | Post | | | |
| 27 | 31 | 37.1 | 39.6 | 4 | 304 | |
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School District Hartford (1-3) Component Title Higher Horizons 100 (4-8)

FOR BASIC SKILLS PROJECTS WHICH SERVED PUPILS AT OR ABOVE GRADE TWO, USE THIS PAGE

1. INSTRUCTIONAL SERVICE (Check One) ☐ READING ☐ LANGUAGE ARTS ■ MATH (9)
2. TYPE OF NORMS USED IN SCORE CONVERSIONS ■ NATIONAL ☐ OTHER (Specify) (10)
3. WAS THE PRETEST INSTRUMENT USED TO SELECT PROGRAM PARTICIPANTS? ■ NO ☐ YES → (see instructions) (11)
4. TESTING PATTERN (12)
   - ■ Fall to Spring
   - ☐ Spring to Spring
   - ☐ Fall to Fall
   - ☐ More than 12 months

| Column A | Column B | Column C | TEST INFORMATION | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Grade Level | No. of Pupils Who Received Instructional Services | No. of Pupils Pre/Post-tested | Name of Test | Edition (year) | Name of Subtest | Pre/Post Battery Level | Pre/Post Form | Month of Pre/Post Tests | Pre Test $\bar{x}$ S.S. | Post Test $\bar{x}$ S.S. |
| 10 | 93 | 76 | CTBS | 1973 | Concepts | 4 / 4 | S / S | May / Sept | 497.6 | 519.4 |
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School District Hartford Component Title Higher Horizons 100 Page 5

(continued from p. 4) FOR BASIC SKILLS PROJECTS WHICH SERVED PUPILS AT OR ABOVE GRADE TWO

Weighted mean project gain:

Total, Column G ÷ Total, Column C = 1

(Check One)
- ☐ Reading
- ☐ Language Arts
- ■ Mathematics

| Column D | | Column E | | Column F | Column G | |
|---|---|---|---|---|---|---|
| Associated Percentiles | | Associated N.C.E.s (or x N.C.E.) | | N.C.E. Gain | Weighted N.C.E. Gain= (col. C x col. F) | CSDE USE ONLY |
| Pre | Post | Pre | Post | | | |
| 20 | 21 | 32.3 | 33.0 | 1 | 76 | |
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| 66 | | (19-20) | (21-22) | | 76 Total | (23-30) |